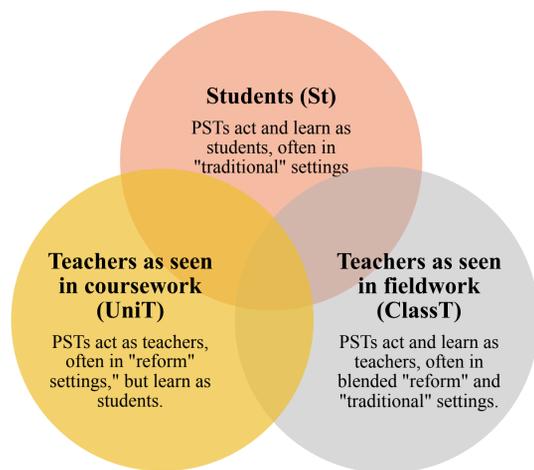


Building Bridges, Deepening Knowledge: Engaging Novices, Practicing Teachers, and Researchers in Inquiry Together

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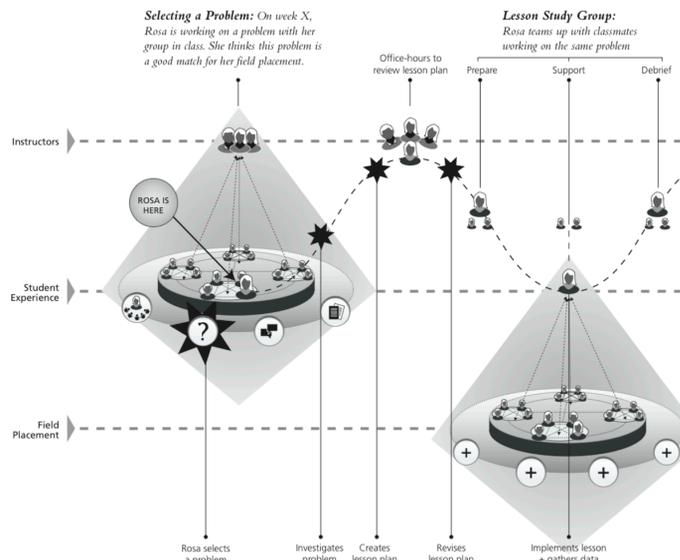
What and how do pre-service teachers (PSTs) and mentor teachers (MTs) learn from conversations in field placements?

PST's Figured Worlds



The situation in which PSTs find themselves can be understood using the concept of figured worlds (Holland, 1998; Ma & Singer-Gabella, 2011): sets of socially-constructed values, meaning, and roles that members of a social group develop, take on, and perpetuate for themselves and for the group. PSTs working in the field move between at least three different figured worlds, whose values, meanings, and roles for students and teachers overlap but also sometimes clash in potentially confusing ways.

PSTs in EDUC 130 "K & L" reflect on diagram as part of a course map, outlining the figured worlds they are to travel between throughout the semester. Students select a K&L problem from class, and after careful analysis, design a lesson to implement that problem in their field placement.



Abstract

Whereas mentor teachers play important roles in preparing pre-service teachers (PST), their expertise is not optimally leveraged as contributions to teacher-training college courses in coordination with researchers/instructors. This project follows the implementation and evaluation of a new practice supporting productive collaboration among: (1) PST; (2) mentor teachers (MT); and (3) teacher researchers/instructors. The design is the introduction of a collaborative inquiry project into a teacher education course (EDUC 130: Knowing and Learning in Mathematics and Science), where students serve placements in a Bay Area public high school. Funded by a Spencer Grant, the project seeks to address questions of both the theory and practice of teacher education situated across college and school settings, as the students negotiate their observations and developing ideas about teaching strategies with the experience of their mentor teacher. We use ethnographic methods to examine negotiations among the stakeholders in the experimental and comparison groups as they work to conceptualize and communicate about resources. Attempts to uncover the cultural practices, roles, and values that emerge from these connections have been facilitated through conversation guides, interviews, and pre-post semester surveys.

Study Design

- Year-long study to improve field placement experiences for students and mentor teachers in UC Berkeley's Cal Teach program.
- Designed and implemented a conversation sequence for PSTs and MTs each semester.
 - 3-4 conversations, focusing on PSTs' observations and lesson plan.
 - All conversations were video recorded.
- 5 PST/MT groups participated in Spring 2016; 7 PST/MT groups participated in Fall 2016 (including all 5 MTs from Spring).
- Conducted pre- and post-study surveys of participating PSTs and MTs.

Methods

- Used qualitative methods and discourse analysis to identify emergent conversational themes, patterns in negotiation, and factors that facilitated and hindered negotiation.
 - Used **episodes of pedagogical reasoning (EPRs)** to capture segments of conversation with reasoning around a single topic (Horn, 2005).
 - Traced how conversational themes evolved within and across EPRs.
 - Identified statements introducing and perpetuating coded theme, and coded for whether they reiterated, substantiated, connected, or re-oriented the initial theme.
- EPRs that involved this process of were coded as containing **negotiation**.
- Identified tangible objects, ideas, words, and phrases that functioned as **boundary objects**.
- Analyzed EPRs without negotiation for objects that did not become boundary objects.

Results

Semester One (Spring 2016)

- | Findings | Response |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| • PSTs struggled to plan lesson if it wasn't based on K&L problem. | • Decided PSTs should remain teaching K&L problems |
| • PSTs, MTs, & course instructors define K&L problems in different ways | • Developed a common understanding of features of K&L problems, with examples |
| • PST & MT conversations were sometimes tense and judgmental, or lacked substance | • Developed structured conversation guides, usable without the researchers present |

Sample from Conversation Guide



Framing: *In this meeting, you and your mentor teacher should talk about what you've been observing when you visit your mentor teacher's classes. This is a great opportunity for you to find out more about why your mentor teacher structures class in particular ways, what your mentor teacher knows about how his or her students interact with math and with each other, and how your mentor teacher interprets some of your observations, given his or her additional experience. You may find that you've noticed something that hadn't stood out to the other person. You also may find that the way you interpreted an observation is different from how your mentor interprets it. Try to understand the similarities and differences in your observations.*

Semester Two (Fall 2016)

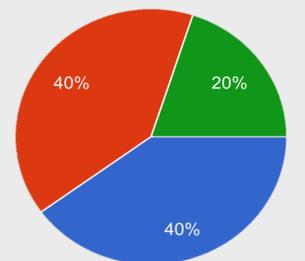
Findings

- **MT's who responded to the survey said that they and their PSTs got more out of the field placement than they had in previous semesters.**

"...I think he was able to see what was happening in the classroom through my eyes."

"I think having the conversations allows us to go in depth on issues that are necessary but wouldn't immediately come to mind. This allowed her to hear about topics that would not necessarily be covered in their regular classrooms."

"How closely aligned do you think your and your mentee's views on good teaching and learning are? (Try to think less about whether your mentee can enact those views, and more about what they are.)"



- We share similar views on good teaching and learning.
- Our views on good teaching and learning have some important similarities and differences.
- Our views on good teaching and learning are very different.
- Other

Literature Cited

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Conclusions/ Next Steps

Overall, structured conversations between MT and PSTs improved PSTs' learning opportunities. Analysis showed that conversations centered around objects for which PSTs and MTs had shared experiences were the most productive. Conversations around objects for which they did not have shared experiences- in part because of different framings PSTs picked up in coursework- were tense and unproductive. More research is needed into identifying useful objects and framings for centering PST-MT discussions.

Acknowledgments

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